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The opinion in support of the decision being entered today
(1) was not written for publication in a law journal and
(2) is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TERRY V. FRIESEN,
JAMES J. HARRISON and WILLIAM R. RUHE, JR.

Appeal No. 1997-0494
Application 08/275,860

ON BRIEF

Before KIMLIN, METZ and WARREN, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

Decision on Appeal

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner finally rejecting claims 1, 3 and 4. Claims 5 through 9 are also of record and have been allowed by the examiner. Claim 1 is illustrative of the claims on appeal:

1. A lubricating oil composition comprising
 - (a) a major amount of an oil of lubricating viscosity;
 - (b) a minor amount of a carbonated sulfurized metal alkyl phenate and

- (c) a minor amount of a carbonated metal alkyl aryl sulfonate, wherein the total base equivalents donated by the phenate is at least 90% of the total base equivalents donated by the phenate and the sulfonate.

The appealed claims as represented by claim 1¹ are drawn to a lubricating oil composition comprising at least the ingredients in the amounts specified, wherein the total base equivalents donated by the carbonated sulfurized metal alkyl phenate is about 90% of the total base equivalents donated by the phenate and the carbonated metal alkyl aryl sulfonate. According to appellants, the “phenate-containing lubricating oils having good soot dispersancy and good rust inhibition” (specification, page 1).

The reference relied on by the examiner is:

Vernet et al. (Vernet)

5,071,576

Dec. 10, 1991

The examiner has rejected appealed claims 1, 3 and 4 under 35 U.S.C. § 103 as being unpatentable over Vernet.² We affirm this ground of rejection and thus the decision of the examiner.

Rather than reiterate the respective positions advanced by the examiner and appellants, we refer to the examiner’s answer and to appellants’ brief for a complete exposition thereof.

Opinion

We have carefully reviewed the record on this appeal and based thereon find ourselves in agreement with the examiner that the claimed lubricating oil composition encompassed by appealed claim 1 would have been obvious over the teachings of Vernet to one of ordinary skill in this art at the time the claimed invention was made.

There is no dispute that the individual ingredients of the claimed lubricating oil compositions are shown in Vernet. The dispositive issue, therefore, is whether Vernet in disclosing lubricating oil compositions containing blends of carbonated sulfurized metal alkyl phenate and the carbonated metal alkyl aryl sulfonate, wherein the weight percent of the phenate can “usually” be up 10 to 90 *wt %* of the blend of these two ingredients (e.g., col. 3, lines 43-47), each of which can “have a high total base number, as measured by ASTM D 2896, . . . preferably in the range of 30-400” (col. 2, lines 21-24),

¹ Appellants state in their brief (page 3) that the appealed claims “stand or fall together.” Thus, we decide this appeal based on appealed claim 1. 37 CFR § 1.192(c)(7) (1995).

² The rejection is stated in the examiner’s action of February 6, 1995 (Paper No. 5) (answer, page 3).

would have disclosed lubricating oil compositions wherein the phenate provides at least 90% of the *total base equivalents* donated by the phenate and the sulfonate to one of ordinary skill in this art.

We agree with the examiner (*see supra* note 2) that, *prima facie*, Vernet teaches lubricating oil compositions wherein the phenate provides at least 90% of the *total base equivalents* donated by the phenate and the sulfonate. Indeed, we observe that the phenate would provide about 93% of the total base equivalents in a blend of 50 wt % of a phenate having a TBN of 400 and 50 wt % of a sulfonate having a TBN of 30 prepared following the teachings of the reference. Further selection within the teachings of the reference of increasing amounts of phenate with decreasing TBN values and conversely for the sulfonate ingredient to where, as appellants submit (brief, pages 4-5), a phenate and sulfonate of equivalent TBN are employed at 90 wt % of the phenate, would also result in blends wherein the phenate would provide at least 90% of the total base equivalents as specified in appealed claim 1. Thus, we find that *prima facie*, one of ordinary skill in this art would have reasonably arrived at the claimed lubricating oil compositions encompassed by claim 1 by routinely following the teachings of Vernet. *See Merck & Co. v. Biocraft Labs, Inc.*, 874 F.2d 804, 807, 10 USPQ2d 1843, 1845-46 (Fed. Cir. 1989); *In re Boesch*, 617 F.2d 272, 275-76, 205 USPQ 215, 218-19 (CCPA 1980); *In re Lemin*, 332 F.2d 839, 141 USPQ 814 (CCPA 1964).

Accordingly, since a *prima facie* case of obviousness has been established over Vernet by the examiner, we have again evaluated all of the evidence of obviousness and nonobviousness based on the record as a whole including the evidence in appellants' specification, giving due consideration to the weight of appellants' arguments. *See generally, In re Johnson*, 747 F.2d 1456, 1460, 223 USPQ 1260, 1263 (Fed. Cir. 1984); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

We have carefully considered all of appellants' arguments and the evidence presented in the specification. While we find that the formulae presented by appellants (brief, page 4) useful in considering the teaching of Vernet, we cannot agree with the position advanced by appellants (*id.*, page 5) because the TBN taught for the phenate and sulfonate in the reference was not taken into account. Indeed, as we demonstrated above, and contrary to appellants' contentions, one of ordinary skill in this art routinely following the teachings of the reference would have arrived at blends of phenate and

sulfonate where the phenate provides at least 90% of the total base equivalents other than the blends where the phenate and the sulfonate have the same TBN and the phenate is present in the amount of 90 wt %.

We cannot agree with appellants that, on this record, the evidence provided by a comparison of the lubricating oil compositions of invention Examples 2 and 3 with Comparative Examples 4 through 7 demonstrate “an unexpected significant reduction in the average viscosity increase due to soot loading” (brief, pages 7-8). It is well settled that the burden of establishing the significance of data in the record, with respect to unexpected results or for other purposes, rests with appellants, which burden is not carried by mere arguments of counsel. *See generally, In re Geisler*, 116 F.3d 1465, 1470, 43 USPQ2d 1362, 1365-66 (Fed. Cir. 1997); *In re Huang*, 100 F.3d 135, 140, 40 USPQ2d 1685, 1689-90 (Fed. Cir. 1996); *In re Merck & Co.*, 800 F.2d 1091, 1099, 231 USPQ 375, 381 (Fed. Cir. 1986); *In re Longi*, 759 F.2d 887, 897, 225 USPQ 645, 651-52 (Fed. Cir. 1985); *In re Klosak*, 455 F.2d 1077, 1080, 173 USPQ 14, 16 (CCPA 1972); *In re Borkowski*, 505 F.2d 713, 718, 184 USPQ 29, 33 (CCPA 1974); *In re D’Ancicco*, 439 F.2d 1244, 1248, 169 USPQ 303, 306 (CCPA 1971). Appellants have not carried their burden on this record.

We find that each of the compared lubricating oil compositions contains “polyamino alkenyl or alkyl succinimide” (specification, page 11, line 18). While lubricating oil compositions containing this ingredient, along with other listed ingredients (*id.*, page 11, lines 15-23), would fall within appealed claim 1 in view of the transitional term “comprising” as long as the specified lubricating oil, phenate and sulfonate ingredients are present as specified,³ it is not a required ingredient in either claim 1 and is not disclosed in Vernet. We further find, based on the reported wt % (*id.*, page 12), that the wt % of the phenate based on the phenate *and* the sulfonate present in the lubricating oil compositions of invention Examples 2 and 3 is 93.59% and 96.85%, respectively, and that the wt % of this same ingredient in the compositions of Comparative Examples 4 through 7 is 90.22%, 86.73%, 83.11% and 61.76%,

³ *See Exxon Chemical Patents Inc. v. Lubrizol Corp.*, 64 F.3d 1553, 1555, 35 USPQ2d 1801, 1802 (Fed. Cir. 1995) (“The claimed composition is defined as comprising - meaning containing at least - five specific ingredients.”); *In re Baxter*, 656 F.2d 679, 686-87, 210 USPQ 795, 802-03 (CCPA

respectively. Thus, the wt % of the phenates used in the compositions of invention Examples 2 and 3 fall outside of the “usual” wt % range for this ingredient taught by Vernet while those of the compositions of Comparative Examples 4 through 7 are within that range. We further note that while the lubricating oil composition of Comparative Example 1 contains “low overbase calcium sulfonate,” as do all of the tested compositions, unlike the other tested compositions, this composition does not contain a “carbonated magnesium alkylsulfonate” (*id.*, e.g., page 11, lines 19 and 29-30, and page 12 lines 4-5 and 11).⁴ Thus, the composition of Comparative Example 1 is not found in Vernet for the additional reason that it does not contain an ingredient required by the reference. It would appear that the TBN of the phenates and sulfonates employed in the tested compositions would fall within the teachings of Vernet.

We have tabulated the reported average % viscosity increase due to soot loading along with the reported % total base equivalents provided by the phenate and the wt % of the phenate with respect to the sulfonate (see above) for the compared lubricating oil compositions. In addition, we have included the reported rust inhibition ratings for invention Examples 2 and 3 and Comparative Examples 1 and 4 (*id.*, pages 13-14) discussed by the examiner (answer, page 5).

Example	average % viscosity increase	Rust rating (10 = clean)	% total base equivalents – phenate	wt % phenate
Comparative Example 1	155	8.26	100	100
Invention Example 2	155	8.6	90	93.59
Invention Example 3	159	8.76	95	96.85
Comparative Example 6	162		75	83.11
Comparative Example 7	167		50	61.76
Comparative Example 5	168		80	86.73
Comparative Example 4	171	8.8	85	90.22

Appellants provide a graph (brief, page 7) in which the plotted points are based on % total base

1981) (“As long as one of the monomers in the reaction is propylene, any other monomer may be present, because the term ‘comprises’ permits the *inclusion* of other steps, elements, or materials.”).

⁴ We find from the specification that a “carbonated magnesium alkylsulfonate” is a “carbonated metal alkyl aryl sulfonate” as specified in claim 1 (*id.*, e.g., page 3, lines 15-19).

equivalents which read Comparative Example 7 through 4 (Comparative Example 6 marked), invention Examples 2 and 3 (invention Example 3 marked) and Comparative Example 1.

Appellants contend that the data “shows that the average viscosity increase due to soot loading is significantly lower when the total base equivalents donated by the phenate is at least 90% of the total donated by the phenate and sulfonate (7% less than when the phenate is 85% [sic, 75%] of the total base equivalents donated by the phenate and sulfonate),” pointing out that Example 3 is the worst of the invention Examples while Comparative Example 6 is the best of the comparative Examples, which “difference is even more pronounced, when looking at the general trends” in the data (brief, pages 7-8). The examiner is of the view that the “data show a difference in the degree that viscosity increases due to soot loading, but not a difference in the” this property, and further points out that the difference in rust rating is also a matter of degree (answer, page 5).

At the outset, we find that the Comparative Examples do not reflect the teachings of Vernet for several reasons. First, as we noted above, Vernet does not teach or disclose the use of a “polyamino alkenyl or alkyl succinimide” which is found in all of the compared lubricating compositions. And, second, Comparative Example 1 does not contain an overbased carbonated metal alkyl aryl sulfonate taught as taught by Vernet. Thus, at least to this extent, the showing does not reflect the closest prior art. *See In re Burckel*, 592 F.2d 1175, 1179, 201 USPQ 67, 71 (CCPA 1979) (“A Rule 132 affidavit, to be effective, must compare the claimed subject matter with the closest prior art.”). Furthermore, in the absence of an explanation of the practical significance of the results with respect to both of the properties tested in the specification, the presence of this ingredient would appear to obscure any actual difference in result with respect to either of the tested properties which may be due to the difference in the content of the percent of the total base equivalents provided by the phenate. *See In re Heyna*, 360 F.2d 222, 228, 149 USPQ 692, 697 (CCPA 1966). In any event, even if the evidence on this record was found to show unexpected results, the presence of the unnecessary succinimide ingredient alone establishes that the evidence is not commensurate in scope with the appealed claims. *See In re Kulling*, 897 F.2d 1147, 1149-50, 14 USPQ2d 1056, 1058 (Fed. Cir. 1990); *In re Dill*, 604 F.2d 1356, 1361, 202 USPQ 805, 808-09 (CCPA 1979).

The presence of the unnecessary succinimide notwithstanding, in the absence of an explanation of the practical significance of the evidence, we find little basis for counsel's view that the evidence in the specification with respect to average viscosity increase due to soot loading shows "general trends" establishing that a significant difference in properties occurs when at least 90% of the total base equivalents is donated by the phenate. Indeed, on this record, the data is inconsistent with respect to average viscosity increase due to soot loading either in the invention Examples when compared alone (the more phenate by total base equivalents and wt %, Example 3, the worse the result) or with Comparative Example 1 (100% phenate by total base equivalents and wt achieved the best rating along with invention Example 2 which has a lower amount of phenate by total base equivalents and wt than Example 3, both of which contain a sulfonate), or in the Comparative Examples. In comparison, we find a trend in the rust rating data which shows that the rust rating decreases as the amount of phenate (by total base equivalents and wt %) increases.

Accordingly, on this record, we find no evidence which establishes the criticality of the claim limitation that phenate donates at least 90% of the total base equivalents. *See Merck, supra; Longi, supra.* We further find that even if the criticality of this limitation was established as to one of the properties, such a showing would not establish the criticality of this limitation with respect to the teachings of Vernet because there is no evidence or explanation establishing that the results reported for invention Examples 2 and 3, wherein the phenate falls outside of the "usual" wt % range shown in the reference would obtain with phenates providing at least 90% of the total base equivalents falling within said wt % range, which we demonstrated above to be within the teachings of the reference. Thus, on this basis, the evidence does not address the thrust of the rejection. *See Burckel, supra* ("[T]he affidavit does not even address the thrust of the rejection"). Moreover, even if the evidence did demonstrate that unexpected results are obtained with the compositions of invention Examples 2 and 3 with respect to average viscosity increase due to soot loading, we find the evidence to be so disparate with respect to the effectiveness of the composition and the % of the total base equivalents provided by the phenate therein that it does not "permit a conclusion respecting the relative effectiveness of" other claimed lubricating oil compositions and the lubricating oil compositions taught by Vernet, *see In re Payne*, 606 F.2d 303, 316 n.10, 316-18, 203 USPQ 245, 256 n.10, 256-58 (CCPA 1979), and, in

any event, the showing with respect to two compositions outside of the teachings of the reference is insufficient to establish that the differences shown would obtain with other lubricating compositions encompassed by appealed claim 1. See *In re Clemens*, 622 F.2d 1029, 1035-36, 206 USPQ 289, 295-96 (CCPA 1980); *Boesch*, 617 F.2d at 277-78, 205 USPQ at 219-20; *In re Lindner*, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA 1972).

Finally, we have considered appellants' arguments that patentability can reside in a "parameter . . . not previously recognized to be result-effective" and the authority cited in support of this position. We cannot agree with appellants that the limitation that "the total base equivalents donated by the phenate is at least 90% of the total base equivalents donated by the phenate and the sulfonate" is an unexpected result effective variable because, as pointed out by the examiner (answer, page 5), "Vernet teaches that the additive composition may contain up to 90% of the phenate, and this teaching would [have] reasonably suggested that a higher level of the phenate than the sulfonate may be used." Thus, on this record, appellants have done no more than determine the optimum amount of the total base equivalents donated by the phenate following the teachings of Vernet and have not established the criticality of the claimed range for the reasons we have set forth above.

Accordingly, based on our consideration of the totality of the record before us, we have weighed the evidence of obviousness found in Vernet with appellants' countervailing evidence of and argument for nonobviousness and conclude that the claimed invention encompassed by appealed claims 1, 3 and 4 would have been obvious as a matter of law under 35 U.S.C. § 103.

The examiner's decision is affirmed.

Appeal No. 1997-0494
Application 08/275,860

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

EDWARD C. KIMLIN
Administrative Patent Judge

ANDREW H. METZ
Administrative Patent Judge

CHARLES F. WARREN
Administrative Patent Judge

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